REMARKS

Applicant respectfully thanks the Examiner for accepting the drawings filed on June 22, 2001. Claims 1-4 and 6-23 are pending in the present case. Claims 1, 9, 12, and 23 are amended herein. Claim 5 is cancelled herein. Applicant respectfully requests reconsideration in view of the above amendments to the present application, and the arguments set forth below. No new matter is added herein.

REJECTIONS OF THE CLAIMS

In the present rejection, Claims 1-23 are rejected under 35 USC 103(a) over US Patent No. 5,564,010 to Henry, et al. (hereinafter Henry) in view of an IBM TDB (Vol. 36, Issue 8, pp. 179-180, 8/1/1993) entitled "Electronic Circuit Protector-Circuit Breaker" (hereinafter Circuit Breaker TDB). Applicant has reviewed the references cited and respectfully asserts that they do not teach or suggest the embodiments of the present invention as recited in Claims 1-2 and 4-21 for the following rationale.

As Applicant understands the reference, Henry teaches a reset signal generator. However, Applicants find no teaching or suggestion within Henry directed towards using a switched mode pump used with the power supply. The initializer taught by Henry differs from embodiments of the present invention recited in independent Clams 1, 12, and 23.

As amended herein, independent Claims 1, 12, and 23 read as follows, with underlining added herein for emphasis:

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1.   A circuit for providing power on reset
functions and a plurality of functions for power system
control <u>for a microcontroller</u>, comprising:

a first stage for performing power on reset
functions and functions related to operational, post
power on reset power stability;

a second stage for stimulating a reliable source of
startup power during power on reset, wherein said second
stage produces a first signal for forcing <u>a switch mode
pump</u> to drive up voltage provided to said common power
supply and a second signal forcing said microcontroller
into a power on reset condition;

a bus for providing an interconnection with a
processor; and

a processor providing dynamic control over said
first stage.

12.   A circuit for providing power on reset
functions and a plurality of functions power system
control <u>for a microcontroller</u>, comprising:

a) a power supply scaler for receiving an input
voltage from a <u>switched mode pump</u> common supply source,
dividing said input voltage into a plurality of output
scaler voltages;

b) a source of a precision reference voltage for
comparison to said plurality of scaler output voltages;

c) a plurality of comparators for comparing said
precision reference voltage and said plurality of scaler
output voltages;

d) a qualifier for validating said precision
reference voltage;

e) an initial power reference source for providing
a reliable voltage reference while energizing said
microcontroller; and

f) a logic gate for asserting a reset condition on
said microcontroller.

21.   <u>In a microcontroller</u> having a power supply, a
method of performing power stability functions utilizing
a power on reset circuit, during startup and post-
startup operations, said method comprising:

a) performing a power on reset function during
startup <u>wherein said power supply is fed by a switched
mode pump</u>; and

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      b) utilizing said power on reset circuit, during
post-startup operation to:
      perform power on reset functions upon trip;
      monitor a condition of said power supply;
      control said switch mode pump; and
      provide auxiliary control, indication, and memory
protective trip.
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As amended herein, Claims 1, 12, and 23 recite that the power supply comprises a switched mode pump.

Conventional POR circuits are separate from switched mode pump control, both during and after booting-up. In the embodiments recited in Claims 1, 12, and 23, the switched mode pump is used as a power supply advantageously controlled with the power on reset circuit. This conveniently optimizes microcontroller power states. Further, this is achieved without extra demand on system resources or requirement for additional system resources. Henry fails to teach or suggest the switch mode pump power supply.

As Applicants understand the reference, the Circuit Breaker TDB teaches a circuit breaker. Although the Circuit Breaker TDB describes a switch mode pump (pp. 1-2), the reference is expressly directed to a circuit breaker. Circuit breakers are commonly known to be protective devices that open a circuit upon sensing excess current and which are capable of being reset. Freedman, A. Computer Desktop Encyclopedia 9th ed., p. 141, Osborne/McGraw-Hill (2001); Basic Electricity (1969 ed.), p. 458, US Navy Rate Training Manual, Bureau of Naval Personnel NAVPERS 10086-B (Superintendent of Documents, USGPO, Stock No. 008-047-00069-3/Cat.No. D 208.11:EL2/3/969).

The circuits and method recited in Claims 1, 12, and 23 recite microcontroller circuits. A microcontroller (sometimes referred to as a "computer on a chip') is commonly defined as "[a] single chip [e.g., an integrated circuit] that contains [a] processor, RAM, ROM, clock, and I/O control unit.' Freedman, A., *supra* at pp. 172, 606. The microcontrollers recited in Claims 1, 12, and 23 differ markedly from the circuit breaker device described by the Circuit Breaker TDB. Applicants respectfully assert that, in expressly teaching a circuit breaker device, the Circuit Breaker TDB reference teaches away from the embodiments recited in Claims 1, 12, and 23, and thus fails to cure the defects of Henry. Henry fails to cure the defects of the TDB Circuit Breaker reference.

Applicants respectfully point out that, obviousness can only be established by combining or modifying the teachings of the references cited to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found in either the references themselves or knowledge generally available to one of ordinary skill in the art. MPEP § 2143.01, ¶ 3; In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Here, Applicants have reviewed both the Henry and TDB Circuit Breaker references and yet find no teaching, suggestion, or motivation to modify the teachings therein to use a switched mode pump as a power supply in a microcontroller, as recited in Claims 1, 12, and 23 of the present invention. Further, as discussed above, Wittman expressly teaches away from such embodiments. Thus, Applicants respectfully assert that Claims 1-2 and 4-21 are allowable over Henry in view of the TDB Circuit Breaker reference.

CONCLUSION

By the rationale stated above, Applicants respectfully assert that Claims 1-4 and 6-23 are allowable under 35 USC 103(a). Accordingly, Applicants respectfully request that the rejection of these claims under this statute be withdrawn and that Claims 1-4 and 6-23 be timely allowed.

Please charge our deposit account No. 23-0085, for any unpaid fees.

Respectfully submitted,

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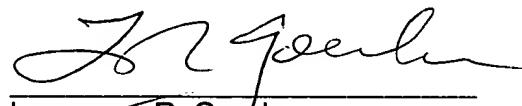
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